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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/922,770

08/07/2001

Avner Pierre Badchi

42043

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1609

7590

03/13/2003

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EXAMINER

BEREZNY, NEMA O

ART UNIT

PAPER NUMBER

2813

DATE MAILED: 03/13/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/922,770

Applicant(s)

BADEHI, AVNER PIERRE

Examiner

Nema O Berezny

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-29, 33, 34 and 36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-29, 33, 34 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/725,166.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Specification

The objection to the abstract made in prior Office Action is hereby withdrawn, subsequent to corrections made by Applicant in Amendment B, filed 12-26-02.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 21 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 21 requires that the packaging layer be sealed onto the substrate. However, amended claim 20 requires that the packaging layer is sealed onto the spacer and the spacer is provided onto the substrate. Therefore, the packaging layer could not be sealed onto the substrate.

The rejection of claim 26 under 35 USC 112 second paragraph, made in prior Office Action is hereby withdrawn, subsequent to corrections made by Applicant in Amendment B, filed 12-26-02.

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Claim Objections

Claim 25 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitation of a transparent packaging layer is already claimed in amended claim 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 20, 25, and 28-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Wetzel (6,268,231). Wetzel discloses providing a microelectronic structure (Fig.1a-1b no number) on a substrate (el.12); providing a spacer (el.14) onto said substrate, said spacer defining at least one cavity extending entirely therethrough; and adhesively sealing at least one transparent packaging layer (el.16) onto said spacer over said microstructure and at least partially spaced therefrom, thereby to define a gap at said at least one cavity between said microstructure and said at least one packaging layer, wherein said spacer is formed as a piece separate from said substrate and from

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said at least one packaging layer (col.3 lines 15-40; col.3 line 61 – col.4 line 2). Wetzel also discloses providing an optoelectronic structure (col.3 lines 8-14).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 22-23, 26-27 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wetzel as applied to claims 20-21 above, and further in view of Salatino et al. (5,915,168). Wetzel does not disclose adhesively sealing said packaging layer with epoxy, providing a silicon substrate, providing a plurality of cavities in said substrate, or providing a micromechanical or surface acoustic wave structure. However, Salatino discloses sealing a cover structure to a substrate using epoxy (col.5 lines 13-19). Therefore, it would have been obvious to a person skilled in the art at the time of the invention to use the epoxy of Salatino with the method of Wetzel, wherein epoxy provides a good moisture impermeable seal.

Salatino also discloses a silicon substrate (col.6 lines 5-6). Therefore, it would have been obvious to a person skilled in the art at the time of the invention to use the silicon substrate of Salatino with the method of Wetzel, wherein the base substrate could be made of the same material as the device, such as the air bridge structure of Salatino (col.3 lines 21-26).

Salatino also discloses a plurality of cavities (col.5 lines 46-61). Therefore, it would have been obvious to a person skilled in the art at the time of the invention to use the plural cavities of Salatino with the method of Wetzel in order to mass produce a plurality of packaged devices.

Salatino also discloses providing a micromechanical device and a surface acoustic wave device (col.5 lines 27-32). Therefore, it would have been obvious to a person skilled in the art at the time of the invention to use the micromechanical device of Salatino with the method of Wetzel, wherein a covered package with a gap between the microstructure and the cover is required for a micromechanical and surface acoustic wave structure.

Claims 24, 33, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wetzel as applied to claim 20 above, and further in view of Ichikawa et al. (5,996,199). Wetzel does not disclose providing a substrate made of lithium niobate, lithium tantalate, or quartz. However, Ichikawa discloses forming a microstructure on a quartz, lithium niobate, and lithium tantalate substrate (col.2 lines 51-54). Therefore, it would have been obvious to a person skilled in the art at the time of the invention to use the substrates of Ichikawa with the method of forming a crystalline substrate based device of Wetzel in order to absorb light of a particular frequency used in surface acoustic wave (SAW) devices (Ichikawa – col.15 lines 29-36).

Response to Arguments

Applicant's arguments with respect to claims 20-29, 33-34, and 36 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nema O Berezny whose telephone number is (703) 305-3445. The examiner can normally be reached on M-F 8:30-5:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on (703) 308-4940. The fax phone

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numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

NB
March 9, 2003


CARL WHITEHEAD, JR.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800